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Harald van Kampen

Kampen 1-13

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EXAMINER

LOO, JUVENA W

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/743,595	Applicant(s) VAN KAMPEN ET AL.	
	Examiner JUVENA LOO	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on February 28, 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The Declaration filed on October 30, 2007 under 37 CFR 1.131 is sufficient to overcome the Meiser reference.
2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 - 4, 7, 10, 12, 18, and 19 are rejected under 35 USC 102(b) as being anticipated by Lindskog et al. (US 2002/0132603 A1).

Regarding claim 1, Lindskog discloses the features:

at a station of a contention-based WLAN system in which the station is adapted to operate in awake and doze states (Lindskog: see "The invention refers...at least one access point" in Abstract), *a method comprising:*

(A) the station transitioning from the doze state to the awake state (Lindskog: see “Upon an order from the PC...with “Power Management field” set to active for 802.11” in page 3, section 0057); and

(B) the station transmits to an access point (AP) of the system a first frame, wherein a designated bit in the first frame informs the AP that the station will remain in the awake state and be available to receive at least one transmission from the AP (Lindskog: see “Upon an order from the PC...with “Power Management field” set to active for 802.11” in page 3, section 0057).

Regarding claim 2, Lindskog discloses the feature:

wherein the contention-based WLAN system conforms to an IEEE 802.11 standard (Lindskog: see “The invention refers to...supporting device power states” in Abstract).

Regarding claim 3, Lindskog discloses the feature:

wherein the contention-based WLAN system conforms to an extension of an IEEE 802.11 standard (Lindskog: see “The invention refers to...supporting device power states” in Abstract).

Regarding claim 4, Lindskog discloses the feature:

wherein steps (A) and (B) are performed independent of any beacon schedule for the system (Lindskog: see “It will be appreciated...of the mobile terminal” in page 3, section 0054).

Regarding claim 7, Lindskog discloses the features:

wherein:

when data is available for transmission from the station to the AP, the first frame corresponds to the data (Lindskog: see “Sleep to Active Transition...mobile terminal for 802.11” in page 3, sections 0056 – 0061); *and*

when there is no data available for transmission from the station to the AP, the first frame is a null frame (Lindskog: see “Sleep to Active Transition...mobile terminal for 802.11” in page 3, sections 0056 – 0061).

Regarding claim 10, Lindskog discloses the feature:

wherein the designated bit is a power management bit of an IEEE 802.11 standard (Lindskog: see “Upon an order from the PC...with “Power Management field” set to active for 802.11” in page 3, section 0057).

Regarding claim 12, Lindskog discloses the features:

further comprising:

(C) with the station in the awake state and the AP informed that the station is in the awake state, transmitting to the AP a closing frame, wherein a designated bit in the

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closing frame informs the AP that the station will transition to the doze state (Lindskog: see “Active to Sleep Transition...the states D1, D2, or D3” in page 3, sections 0050 - 0051); and

(D) transitioning the station from the awake state to the doze state (Lindskog: see “Active to Sleep Transition...the states D1, D2, or D3” in page 3, sections 0050 - 0051).

Regarding claim 18, Lindskog discloses the features:

a station, in a contention-based WLAN system, adapted to operate in awake and doze states comprising:

(A) a processor, wherein, with the station in the doze state, the processor configures the station to transition from the doze state to the awake state (Lindskog: see “Upon an order from the PC...with “Power Management field” set to active for 802.11” in page 3, section 0057); and

(B) a transceiver, wherein the processor configures the transceiver to transmit to an access point (AP) of the system a first frame (Lindskog: see “Upon an order from the PC...with “Power Management field” set to active for 802.11” in page 3, section 0057), wherein a designated bit in the first frame informs the AP that the station will remain in the awake state and be available to receive at least one transmission from the AP (Lindskog: see “Upon an order from the PC...with “Power Management field” set to active for 802.11” in page 3, section 0057).

Regarding claim 19, Lindskog discloses the features:

a contention-based WLAN system, comprising an access point (AP) and a station (Lindskog: see Figure 2), wherein:

the station is adapted to operate in awake and doze states (Lindskog: see Figure 2); and the station comprises:

(A) a processor, wherein, with the station in the doze state, the processor configures the station to transition from the doze state to the awake state (Lindskog: see "Upon an order from the PC...filth "Power Management field" set to active for 802.11" in page 3, section 0057); and

(B) a transceiver, wherein the processor configures the transceiver to transmit to the AP a first frame (Lindskog: see "Upon an order from the PC...filth "Power Management field" set to active for 802.11" in page 3, section 0057), wherein a designated bit in the first frame informs the AP that the station will remain in the awake state and be available to receive at least one transmission from the AP (Lindskog: see "Upon an order from the PC...filth "Power Management field" set to active for 802.11" in page 3, section 0057).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lindskog et al. (US 2002/0132603 A1) in view of Ho et al. (US 2002/0071449 A1).

Regarding claim 5, Lindskog does not explicitly disclose the feature:

further comprising the station receives from the AP an acknowledgement frame corresponding to the first frame.

However, Ho discloses the feature:

further comprising the station receives from the AP an acknowledgement frame corresponding to the first frame (Ho: see Figure 4, 465 – Acknowledgment frame with More Data = 1; see also “In response to the poll request frame 460, the HC transmits a QoS CF-Ack+CF-Poll frame 465 to station 3. The CF-Ack is used as an acknowledgment for the poll request frame 460” in page 7, section 0076).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Lindskog et al. by using the features, as taught by Ho et al., in order to provide acknowledgement of received frames (Ho: see page 7, section 0076).

7. Claims 8, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindskog et al. (US 2002/0132603 A1) in view of Romans (US 2002/0019215 A1).

Regarding claim 8, Lindskog discloses the feature:

wherein:

for step (B), the first frame is a null frame (Lindskog: see “Sleep to Active Transition...mobile terminal for 802.11” in page 3, sections 0056 – 0061).

Lindskog et al. does not explicitly disclose the features:

step (A) comprises starting a timer; and

when there is no data available for transmission from the station to the AP, transitioning the station from the doze state to the awake state after the timer reaches a threshold value.

However, Romans discloses the features:

step (A) comprises starting a timer (Romans: see Figure 5, Wakeup timer expired); and

when there is no data available for transmission from the station to the AP, transitioning the station from the doze state to the awake state after the timer reaches a threshold value (Romans: see Figure 5, Asleep, Wakeup timer expired, and Awake:Waiting for Control Point Beacon; see also “A PS station will wake-up periodically to receive...CPB transmissions” in pages 3-4, section 0065; see also “From the countdown counter...at the start of the broadcast period” in page 4, section 0087).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Lindskog et al. by using the timer feature, as taught by Romans, in order to know when to wake-up from sleep to communication with the access point or other stations (Romans: see page 1, section 0012 and page 4, section 0087).

Regarding claim 9, Lindskog does not explicitly disclose the feature:

the threshold value is less than an inter-beacon time interval.

However, Romans discloses the feature:

the threshold value is less than an inter-beacon time interval (Romans: see “A PS station will wake-up periodically to receive...CPB transmissions” in pages 3-4, section 0065; see also “From the countdown counter...at the start of the broadcast period” in page 4, section 0087).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Lindskog et al. by using the timer feature, as taught by Romans, in order to know when to wake-up from sleep to communication with the access point or other stations (Romans: see page 1, section 0012 and page 4, section 0087).

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lindskog et al. (US 2002/0132603 A1) in view of Lu et al. (US 2003/0185241 A1).

Regarding claim 11, Lindskog does not explicitly disclose the feature:

wherein the designated bit is a more data bit of an IEEE 802.11 standard.

However, Lu discloses the feature:

wherein the designated bit is a more data bit of an IEEE 802.11 standard (Lu: see page 4, section 0039).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Lindskog et al. by using the “More Data” bit feature, as taught by Lu, in order to inform a station that more data are buffered for it at the access point (Lu: page 4, section 0039).

9. Claims 6, 13 - 17, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindskog et al. (US 2002/0132603 A1) in view of Ho et al. (US 2002/0071449 A1) and further in view of Lu et al. (US 2003/0185241 A1).

Regarding claim 6, Neither Lindskog nor Ho explicitly discloses the feature:

wherein a designated bit in the acknowledgement frame informs the station whether the AP has data to transmit to the station.

However, Lu discloses the feature:

wherein a designated bit in the acknowledgement frame informs the station whether the AP has data to transmit to the station (Lu: see page 4, section 0039).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Linskog et al. by using the “More Data” bit feature, as taught by Lu, in order to inform a station that more data are buffered for it at the access point (Lu: see page 4, section 0039).

Regarding claim 13, Linskog discloses the feature:

at an access point (AP) of a contention-based WLAN system in which a station is adapted to operate in awake and doze states, a method comprising:

(A) receiving from the station a first frame, wherein a designated bit in the first frame informs the AP that the station will remain in the awake state and be available to receive at least one transmission from the AP (Linskog: see “Upon an order from the PC...with “Power Management field” set to active for 802.11” in page 3, section 0057).

However, Lindskog does not disclose the feature: *(B) transmitting to the station an acknowledgement frame corresponding to the first frame, wherein a designated bit in the acknowledgement frame informs the station whether the AP has data to transmit to the station.*

Ho discloses the feature:

(B) transmitting to the station an acknowledgement frame corresponding to the first frame, wherein a designated bit in the acknowledgement frame (Ho: see page 6, section 0069; see also Figure 4, 465 – Acknowledgment frame with More Data = 1; see also “In response to the poll request frame 460, the HC transmits a QoS CF-Ack+CF-Poll frame 465 to station 3. The CF-Ack is used as an acknowledgment for the poll request frame 460” in page 7, section 0076).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Lindskog by using the features, as taught by Ho, in order to provide for the use of tokens (received frames with some special qualifications) to determine if a receiving station has the right to transmit next (Ho: see page 6, section 0067).

In addition, Lu discloses the feature:

wherein a designated bit in the acknowledgement frame informs the station whether the AP has data to transmit to the station (Lu: see page 4, section 0039).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Lindskog et al. with Ho et al. by using the features, as taught by Lu et al., in order to indicate to the addressed station that more data are buffered at the access point (Lu: see page 4, section 0039).

Regarding claim 14, Lindskog discloses the feature:

wherein the contention-based WLAN system conforms to an extension of an IEEE 802.11 standard (Lindskog: see “The invention refers to...supporting device power states” in Abstract).

Regarding claim 15, , Lindskog does not explicitly disclose the feature:

wherein the designated bit is a more data bit of an IEEE 802.11 standard.

However, Lu discloses the feature:

wherein the designated bit is a more data bit of an IEEE 802.11 standard (Lu: see page 4, section 0039).

Regarding claim 16, Lindskog discloses the feature:

wherein steps (A) and (B) are performed independent of any beacon schedule for the system (Lindskog: see “It will be appreciated...of the mobile terminal” in page 3, section 0054).

Regarding claim 17, Lindskog discloses the feature:

wherein:

when data is available for transmission from the station to the AP, the first frame corresponds to the data (Lindskog: see “Sleep to Active Transition...mobile terminal for 802.11” in page 3, sections 0056 – 0061); *and*

when there is no data available for transmission from the station to the AP, the first frame is a null frame (Lindskog: see “Sleep to Active Transition...mobile terminal for 802.11” in page 3, sections 0056 – 0061).

Regarding claim 20, Lindskog discloses the feature:

an access point (AP) of a contention-based WLAN system (Lindskog: see Figure 2) *in which a station is adapted to operate in awake and doze states* (Lindskog: see Figure 2), *the AP comprising a processor and a transceiver, wherein the processor configures the transceiver:*

(A) to receive from the station a first frame, wherein a designated bit in the first frame informs the AP that the station will remain in the awake state and be available to receive at least one transmission from the AP (Lindskog: see “Upon an order from the PC...with “Power Management field” set to active for 802.11” in page 3, section 0057).

However, Lindskog et al. does not disclose the feature: *(B) transmitting to the station an acknowledgement frame corresponding to the first frame, wherein a*

designated bit in the acknowledgement frame informs the station whether the AP has data to transmit to the station.

Ho discloses the feature:

(B) transmitting to the station an acknowledgement frame corresponding to the first frame, wherein a designated bit in the acknowledgement frame (Ho: see page 6, section 0069; see also Figure 4, 465 – Acknowledgment frame with More Data = 1; see also “In response to the poll request frame 460, the HC transmits a QoS CF-Ack+CF-Poll frame 465 to station 3. The CF-Ack is used as an acknowledgment for the poll request frame 460” in page 7, section 0076).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Lindskog by using the features, as taught by Ho, in order to provide for the use of tokens (received frames with some special qualifications) to determine if a receiving station has the right to transmit next (Ho: see page 6, section 0067).

In addition, Lu discloses the feature:

wherein a designated bit in the acknowledgement frame informs the station whether the AP has data to transmit to the station (Lu: see page 4, section 0039).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Lindskog et al. with Ho et al. by using the features, as taught by Lu et al., in order to indicate to the addressed station that more data are buffered at the access point (Lu: see page 4, section 0039).

Regarding claim 21, Lindskog discloses the feature:

A contention-based WLAN system, comprising an access point (AP) and a station (Lindskog: see Figure 2), wherein:

the station is adapted to operate in awake and doze states (Lindskog: see “Upon an order from the PC...filth “Power Management field” set to active for 802.11” in page 3, section 0057); and

the AP comprises a processor and a transceiver (Figure 2), wherein the processor configures the transceiver:

(A) to receive from the station a first frame, wherein a designated bit in the first frame informs the AP that the station will remain in the awake state and be available to receive at least one transmission from the AP (Lindskog: see “Upon an order from the PC...filth “Power Management field” set to active for 802.11” in page 3, section 0057).

However, Lindskog et al. does not disclose the feature: *(B) transmitting to the station an acknowledgement frame corresponding to the first frame, wherein a designated bit in the acknowledgement frame informs the station whether the AP has data to transmit to the station.*

Ho discloses the feature:

(B) transmitting to the station an acknowledgement frame corresponding to the first frame, wherein a designated bit in the acknowledgement frame (Ho: see page 6, section 0069; see also Figure 4, 465 – Acknowledgment frame with More Data = 1; see also “In response to the poll request frame 460, the HC transmits a QoS CF-Ack+CF-Poll frame 465 to station 3. The CF-Ack is used as an acknowledgment for the poll request frame 460” in page 7, section 0076).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Lindskog by using the features, as taught by Ho, in order to provide for the use of tokens (received frames with some special qualifications) to determine if a receiving station has the right to transmit next (Ho: see page 6, section 0067).

In addition, Lu discloses the feature:

wherein a designated bit in the acknowledgement frame informs the station whether the AP has data to transmit to the station (Lu: see page 4, section 0039).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Lindskog et al. with Ho et al. by using the features, as

taught by Lu et al., in order to indicate to the addressed station that more data are buffered at the access point (Lu: see page 4, section 0039).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUVENA LOO whose telephone number is (571)270-1974. The examiner can normally be reached on Monday - Friday: 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Juvena Loo/
Examiner
Art Unit 2616
May 07, 2008

/Aung S. Moe/
Supervisory Patent Examiner, Art Unit 2616